

Gender concerns in household energy in Central America

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Many countries in central America as Guatemala, El Salvador, Honduras and Nicaragua still depend very much on wood as energy source. In the specific case of Honduras and Nicaragua, about 60% of the total energy demand is satisfied with fuelwood, since over 50% of the households use it as primary cooking fuel. Fuelwood represents 90% of the overall domestic energy consumption in both countries..

This dominant participation of fuelwood in the overall energy scenario is due mainly to highly inefficient woodstoves. Traditional woodstoves are open fire or semi-open fires such as three stone fire or U shaped stoves. These traditional stoves in general use only 8 to 14% of the energy content of the wood, wasting the remaining through incomplete combustion and radiation.

The immediate result of this high inefficiency is a wasteful consumption of fuelwood, with high cost for the family (either in money for urban families or in collection time for rural families). Furthermore, there is an enormous environmental cost due to high demand for fuelwood and its impacts on deforestation, and air pollution. Air pollution is of key importance because it occurs mostly at indoor level, affecting directly the health of women and children, those most exposed. Indeed, Acute Respiratory Infections is the second leading cause among infants in both countries, which is highly related to indoor air pollution.

Although being the major energy source of these countries, fuelwood doesn't have any political priority. In contrast, petroleum derivatives and electricity have full political attention, with huge government and private organizations dedicating their human and economical resources to improve availability, quality and price for the benefit of consumers. In the other hand, fuelwood for being the energy source of the poorest of the society, and mostly used by uneducated women, in general doesn't have even one government employee, dedicating his full time to work in favor of the modernization of using it. No concerns for the environmental impact, efficient use, availability and affordability, for the benefit of the poor women.

The general political approach to it is. "It is an energy source of the past, and with progress it will eventually disappear". However, many decades have passed, and the socio-economical situation of these countries has not improved enough, to justify a massive switch from traditional to modern fuels. We are already in the XXI century, while the majority of Nicaraguans and Hondurans continues to cook with wood, but still using XV century woodburning technology.

PAST APPROACHES

During the 80's, with the energy crises and the growing concerns for the environment, an effort was made to improve efficiency of the traditional woodstoves. The result was an enclosed fire stove with chimney, artisanally made, and the most well known model is the "Lorena stove". The Lorena stove if well built, operated and maintained, can increase efficiency to 18-20% while significantly reduces indoor air pollution with a chimney.

However, as pointed out by PROLEÑA's 2050 households energy surveys in urban Pacific Nicaragua (payed separately by ESMAP in 1998 and IDB in 1999), the Lorena and other similar design woodstoves, did not resolved the energy problem facing most of the women. First because these stoves were mostly self constructed, its quality was poor and maintainance was as well poor, resulting in not better efficient stove than open fires. Also, because it was only promoted by NGO's and development projects, its dissemination was restricted to their territories. For instance, only 5% of the urban fuelwood users of the Pacific region of Nicaragua in 1999 (most develop and populated region of the country), were aware of improved woodstoves such as Lorena, and only 3% did have one. It was not available for the pubic in general.

Based on the household energy survey (which interview majoritaly women) and in early stoves experiences, PROLEÑA's realized that in order to provide most of the women of Honduras and Nicaragua with a modern and accepted woodstove, the following criterias should be met:

- Self construction should be avoided, for quality reasons. Profesional construction would provide a better quality stove with good performance.
- A clean working environment should be the rule. A smokeless and soot free kitchen is desired by most women.
- Outstanding efficiency should be the case. The fuelwood cost was dragging too much resources from already poor urban families.
- Presentation is essential, to improve the quality of the kitchen environment, and improve women self estem and the importance of its work as the family cooker.
- Microcredit for stove aquisition should be provided, considering that many women was running household business such sales of tortillas, beans and other foods, and therefore with repayment capacity.

THE ECOSTOVE DEVELOPMENT